MYSQL Exercise -

A hand holding a green and white object

AI-generated content may be incorrect.

**Write an SQL query to get all the orders where customers name has "a" as second character and "d" as fourth character?**  
  
SELECT \*

FROM orders

WHERE customer\_name LIKE '\_a\_d%';

**write a SQL to get all the orders placed in the month of dec 2020: question:**

SELECT \*

FROM orders

WHERE order\_Date BETWEEN '2020-12-01' AND '2020-12-31';

**write a query to get all the orders where ship mode is neither in 'Standard Class' nor in 'First Class' and ship\_date is after nov 2020:question:**

SELECT \*

FROM orders

WHERE ship\_mode NOT IN ('Standard Class', 'First Class')

AND ship\_date > '2020-11-30';

**write a query to get all the orders where customer name neither start with "A" and nor ends with "n":question:**

SELECT \*

FROM orders

WHERE customer\_name NOT LIKE 'A%'

AND customer\_name NOT LIKE '%n';

**write a query to get all the orders where profit is negative:question:**

SELECT \*

FROM orders

WHERE profit < 0;

**write a query to get all the orders where either quantity is less than 3 or profit is 0:question:**

SELECT \*

FROM orders

WHERE quantity < 3

OR profit = 0;

**your manager handles the sales for South region and he wants you to create a report of all the orders in his region where some discount is provided to the customers:question:**

SELECT \*

FROM orders

WHERE region = 'South'

AND discount > 0;

**write a query to find top 5 orders with highest sales in furniture category:question:**

SELECT \*

FROM orders

WHERE category = 'Furniture'

ORDER BY sales DESC

LIMIT 5;

**write a query to find all the records in technology and furniture category for the orders placed in the year 2020 only:question:**

SELECT \*

FROM orders

WHERE category IN ('Technology', 'Furniture')

AND order\_Date BETWEEN '2020-01-01' AND '2020-12-31';

**write a query to find all the orders where order date is in year 2020 but ship date is in 2021:question:**

SELECT \*

FROM orders

WHERE YEAR(order\_Date) = 2020

AND YEAR(ship\_date) = 2021;

**write a update statement to update city as null for order ids : CA-2020-161389 , US-2021-156909 ?**

UPDATE orders

SET city = NULL

WHERE order\_id IN ('CA-2020-161389', 'US-2021-156909');

**write a query to find orders where city is null (2 rows) ?**

SELECT \*

FROM orders

WHERE city IS NULL;

**write a query to get total profit, first order date and latest order date for each category ?**

SELECT

category,

SUM(profit) AS total\_profit,

MIN(order\_Date) AS first\_order\_date,

MAX(order\_Date) AS latest\_order\_date

FROM orders

GROUP BY category;

**write a query to find sub-categories where average profit is more than the half of the max profit in that sub-category ?**

SELECT sub\_category

FROM orders

GROUP BY sub\_category

HAVING AVG(profit) > 0.5 \* MAX(profit);

**create the exams table with below script; and write a query to find students who have got same marks in Physics and Chemistry. ?**

CREATE TABLE exams (

student\_id INT,

subject VARCHAR(20),

marks INT

);

SELECT e1.student\_id

FROM exams e1

JOIN exams e2 ON e1.student\_id = e2.student\_id

WHERE e1.subject = 'Physics'

AND e2.subject = 'Chemistry'

AND e1.marks = e2.marks;

**Write a query to findout the all the students marks in chemistry subject? ?**

SELECT student\_id, marks

FROM exams

WHERE subject = 'Chemistry';

**write a query to find total number of products in each category. ?**

SELECT category, COUNT(DISTINCT product\_id) AS total\_products

FROM orders

GROUP BY category;

**write a query to find top 5 sub categories in west region by total quantity sold. ?**

SELECT sub\_category, SUM(quantity) AS total\_quantity

FROM orders

WHERE region = 'West'

GROUP BY sub\_category

ORDER BY total\_quantity DESC

LIMIT 5;

**Write a query to find total sales for each region and ship mode combination for orders in year 2020 ?**

SELECT region, ship\_mode, SUM(sales) AS total\_sales

FROM orders

WHERE order\_Date BETWEEN '2020-01-01' AND '2020-12-31'

GROUP BY region, ship\_mode;

**Write a query to find total sales for each region ?**

SELECT region, SUM(sales) AS total\_sales

FROM orders

GROUP BY region;

**write a query to get region wise count of return orders ?**

SELECT region, COUNT(\*) AS return\_order\_count

FROM orders

WHERE profit < 0

GROUP BY region;

**write a query to get category wise sales of orders that were not returned ?**

SELECT category, SUM(sales) AS total\_sales

FROM orders

WHERE profit >= 0

GROUP BY category;

**write a query to print dep name and average salary of employees in that dep ?**

SELECT department, AVG(salary) AS average\_salary

FROM employees

GROUP BY department;

**write a query to print dep names where none of the employees have same salary ?**

SELECT department

FROM employees

GROUP BY department

HAVING COUNT(DISTINCT salary) = COUNT(salary);

**write a query to print sub categories where we have all 3 kinds of returns (others,bad quality,wrong items) ?**

SELECT sub\_category

FROM orders

WHERE profit < 0

GROUP BY sub\_category

HAVING COUNT(DISTINCT return\_reason) = 3;

**write a query to find cities where not even a single order was returned?**

SELECT DISTINCT city

FROM orders

WHERE city NOT IN (

SELECT city

FROM orders

WHERE profit < 0

);

**write a query to find top 3 subcategories by sales of returned orders in east region?**

SELECT sub\_category, SUM(sales) AS total\_sales

FROM orders

WHERE region = 'East' AND profit < 0

GROUP BY sub\_category

ORDER BY total\_sales DESC

LIMIT 3;

**write a query to print dep name for which there is no employee?**

SELECT department\_name

FROM departments

WHERE department\_name NOT IN (

SELECT DISTINCT department

FROM employees

);

**write a query to print employees name for dep id is not available in dept table?**

SELECT e.emp\_name

FROM employees e

LEFT JOIN dept d ON e.department\_id = d.department\_id

WHERE d.department\_id IS NULL;

**write a query to print emp name, their manager name joining the same table (self-join) ?**

SELECT

e1.emp\_name AS employee\_name,

e2.emp\_name AS manager\_name

FROM employees e1

LEFT JOIN employees e2 ON e1.manager\_id = e2.emp\_id;

**write a query to find subcategories who never had any return orders in the month of November (irrespective of years) ?**

SELECT DISTINCT sub\_category

FROM orders

WHERE sub\_category NOT IN (

SELECT sub\_category

FROM orders

WHERE MONTH(order\_Date) = 11 AND profit < 0

);

**orders table can have multiple rows for a particular order\_id when customers buy more than 1 product in an order. write a query to find order ids where there is only 1 product bought by the customer?**

SELECT order\_id

FROM orders

GROUP BY order\_id

HAVING COUNT(DISTINCT product\_id) = 1;

**write a query to print manager names along with the comma separated list (order by emp salary) of all employees directly reporting to him. ?**

SELECT

e1.emp\_name AS manager\_name,

GROUP\_CONCAT(e2.emp\_name ORDER BY e2.salary DESC SEPARATOR ', ') AS employee\_list

FROM employees e1

LEFT JOIN employees e2 ON e1.emp\_id = e2.manager\_id

GROUP BY e1.emp\_name;

**write a query to get number of business days between order date and ship date (exclude weekends). Assume that all order date and ship date are on weekdays only?**

SELECT

order\_id,

SUM(CASE WHEN DAYOFWEEK(order\_Date) NOT IN (1, 7) THEN 1 ELSE 0 END) AS business\_days

FROM orders

GROUP BY order\_id;

write a query to print 3 columns: category, total sales and (total sales of returned orders): question:

SELECT

category,

SUM(sales) AS total\_sales,

SUM(CASE WHEN profit < 0 THEN sales ELSE 0 END) AS returned\_sales

FROM orders

GROUP BY category;

**write a query to print 3 columns category, total\_sales\_2019(sales in year 2019), total\_sales\_2020(sales in year 2020)?**

SELECT

category,

SUM(CASE WHEN YEAR(order\_Date) = 2019 THEN sales ELSE 0 END) AS total\_sales\_2019,

SUM(CASE WHEN YEAR(order\_Date) = 2020 THEN sales ELSE 0 END) AS total\_sales\_2020

FROM orders

GROUP BY category;

**write a query print top 5 cities in west region by average no of days between order date and ship date.?**

SELECT

city,

AVG(DATEDIFF(ship\_date, order\_Date)) AS avg\_days

FROM orders

WHERE region = 'West'

GROUP BY city

ORDER BY avg\_days DESC

LIMIT 5;

**write a query to print emp name, manager name and senior manager name (senior manager is manager's manager)?**

Create this table and Execute the Question  
create table icc\_world\_cup

(

Team\_1 Varchar(20),

Team\_2 Varchar(20),

Winner Varchar(20)

);

INSERT INTO icc\_world\_cup values('India','SL','India');

INSERT INTO icc\_world\_cup values('SL','Aus','Aus');

INSERT INTO icc\_world\_cup values('SA','Eng','Eng');

INSERT INTO icc\_world\_cup values('Eng','NZ','NZ');

INSERT INTO icc\_world\_cup values('Aus','India','India');

**write a query to produce team\_name, no\_of\_matches\_played , no\_of\_wins , no\_of\_losses this output from icc\_world\_cup table**

SELECT

e1.emp\_name AS employee\_name,

e2.emp\_name AS manager\_name,

e3.emp\_name AS senior\_manager\_name

FROM employees e1

LEFT JOIN employees e2 ON e1.manager\_id = e2.emp\_id

LEFT JOIN employees e3 ON e2.manager\_id = e3.emp\_id;

**write a query to print first name and last name of a customer using orders table (everything after first space can be considered as last name) customer name, first\_name, last\_name ?**

Run below script to create driver’s table:  
CREATE TABLE drivers (

id VARCHAR(10),

start\_time TIME,

end\_time TIME,

start\_loc VARCHAR(10),

end\_loc VARCHAR(10)

);

insert into drivers values('dri\_1', '09:00', '09:30', 'a','b'),('dri\_1', '09:30', '10:30', 'b','c'),('dri\_1','11:00','11:30', 'd','e');

insert into drivers values('dri\_1', '12:00', '12:30', 'f','g'),('dri\_1', '13:30', '14:30', 'c','h');

insert into drivers values('dri\_2', '12:15', '12:30', 'f','g'),('dri\_2', '13:30', '14:30', 'c','h');

SELECT

customer\_name,

SUBSTRING\_INDEX(customer\_name, ' ', 1) AS first\_name,

SUBSTRING\_INDEX(customer\_name, ' ', -1) AS last\_name

FROM orders;

**write a query to print customer name and no of occurrence of character 'n' in the**

**customer name.customer\_name , count\_of\_occurence\_of\_n ?**

SELECT

customer\_name,

LENGTH(customer\_name) - LENGTH(REPLACE(customer\_name, 'n', '')) AS count\_of\_n

FROM orders;

**write a query to print below output from orders data.**

**example output - hierarchy type, hierarchy name ,total\_sales\_in\_west\_region, total\_sales\_in\_east\_region**

|  |  |
| --- | --- |
| Example |  |
| category | Technology |
| category | Furniture |
| category | Office Supplies |
| sub\_category | Art |
| sub\_category | Furnishings |

--and so on all the category, subcategory and ship mode hierarchies?

**the first 2 characters of order\_id represents the country of order placed. write a query to print total no of orders placed in each country (an order can have 2 rows in the data when more than 1 item was purchased in the order but it should be considered as 1 order)?**

SELECT

'category' AS hierarchy\_type,

category AS hierarchy\_name,

SUM(CASE WHEN region = 'West' THEN sales ELSE 0 END) AS total\_sales\_west,

SUM(CASE WHEN region = 'East' THEN sales ELSE 0 END) AS total\_sales\_east

FROM orders

GROUP BY category

UNION ALL

SELECT

'sub\_category',

sub\_category,

SUM(CASE WHEN region = 'West' THEN sales ELSE 0 END),

SUM(CASE WHEN region = 'East' THEN sales ELSE 0 END)

FROM orders

GROUP BY sub\_category

UNION ALL

SELECT

'ship\_mode',

ship\_mode,

SUM(CASE WHEN region = 'West' THEN sales ELSE 0 END),

SUM(CASE WHEN region = 'East' THEN sales ELSE 0 END)

FROM orders

GROUP BY ship\_mode;